

SIX NEW SPECIES OF *PLUSIOTIS* AND ONE NEW *ANOPILOSTETHUS*.

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OF the twenty-seven species of *Plusiotis* Barm. hitherto known, the Tring Museum contains nineteen, including the types of the following species: *P. resplendens* Bouc., *batesi* Bouc., *aurora* Bouc., *lacordairei* Bouc., *auripes* Gray, *boucardi* Sallé, *prasina* Bouc., *sallei* Bouc., *rodiguezi* Bouc., *badeni* Bouc., *mniszewski* Bouc.

To this number we have to add six new forms described in this paper, so that the genus *Plusiotis* now consists of thirty-three species and one named variation (*Pl. aurora* ab. *chrysopedilus* Bates). The apple green *Pl.* ab. *chrysopedilus* Bates shows no other differences from the rich rose pink type-specimen of *Pl. aurora* Bouc. besides colour; and we have the very striking fact to note that the green colour of *chrysopedilus* changes into the red colour of *aurora* when the specimen is placed between eye and light, and that on the other hand *aurora* changes the colour into green when in the same position. This phenomenon reminds one very much of a similar one found in some species of *Ornithoptera* (*O. croesus*, *urvilleana*, etc.). The clay coloured or pinkish buff specimens of *P. costata* Blanch., *adelaida* Hope, and *P. crassimargo* sp. nov., and the bright red *P. optima* Bates, do not show that character.

1. *Plusiotis aurigans* sp. nov.

♂. *P.* supra fortiter aurigans, splendidissima, clypeo et fronte, limbo lato laterali prothoracis opacis vinaceis; infra vinaceo-lutesa, suturis levissime viridescens, subnitens; pygidio opaco luteo-vinaceo. Clypeus late rotundatus, apice sat fortiter reflexus, densissime punctulatus; caput multo sparsius quam clypeus punctatum; mandibulae profunde sinuatae, bidentatae (fere ut in genere *Polidnota*); mentum quadrangulare, lateribus minime rotundatum, apice leviter emarginatum et paucis punctis instructum, medio longitrorsum vix depressum. Prothorax subaequaliter sat fortiter rotundatus, margine apicali utrinque valde sinuato, disco conspicue punctato; limbo vinaceo dense ruguloso-punctato, medio parum impresso. Elytra pone humeros haud impressa, maxima latitudine in medio, parte basali suturali excepta conspicue punctata, punctis in disco parum seriatim dispositis, duabus seriebus conspicuoribus, callo apicali lato, supra leviter convexo.

Pygidium densissime transverse rugulosum, vix punctulatum. Processus mesosternalis sat longus, levissime arcuatus. Metasternum lateribus villosum, grossissime rugato-punctatum. Abdomen lateribus densissime striolatum, paucis punctatum. Tibiae quatuor posticae punctis magnis setiferis instructae, rudes, iutus pro certa luce laete caeruleae.

Long. 29 mm., elytr. 20, lat. 16.

Differs from all species in the rich golden colour of the upper surface, which is even much more golden than in *P. resplendens* Boucard. Otherwise *P. aurigans* is allied to *P. batesi* Bouc. and *P. chrysargyrea* Sallé, from both of which it is easily distinguished, besides colour, by the rather smaller head and broader pronotum, by the punctuation of the elytra, very densely rugulose pygidium and other characters.

The mandibles are very deeply sinuate at the outer edges, more so than in *males* of *P. chrysargyrea* Sallé and *P. resplendens* Bouc.

Hab. Costa Rica.

2. *Plusiotis limbata* sp. nov.

Pl. supra argentea, splendidissima; infra opaca vinaceo-lutosa, tarsis violaceis. Caput medio planatum, impunctatum, clypeo leviter trisinuato, antice parum recurvato, margine vinaceo-lutoso ruguloso-punctato, mentum lateribus rotundatum, mandibulis extus late sinuatae. Prothorax lateribus medio rotundatus, antrorsum gradatim angustatus, retrorsum subrectus, minutissime sinuatus, impunctatus, limbo externo vinaceo-lutoso ruguloso-punctato. Elytra sine punctis et striis: limbo externo angusto, apicali latiore vinaceo-lutoso, antice punctulato, postice striguloso-punctato. Pygidium vinaceo-lutosum ut corpus infra; hoc medio dense ruguloso-punctatum, lateribus dense transverse striato-rugulosum. Metasternum lateribus ruguloso-punctatum, praeterea striolatum; abdomen lateribus rugulosum, segmento apicali minute punctulato.

Long. 25 mm., elytr. 17, lat. 13.

Colour of the upperside as in very white specimens of *P. chrysargyrea* Sallé; clypeus and prothorax narrowly bordered with clay colour; the underside, legs (except the bluish tarsi), and the pygidium entirely of a vinaceous clay colour without gloss, and the margin of the elytra of the same peculiar colour. The new species is slenderer than *P. chrysargyrea*, and even slenderer than *P. argenteola* Bates from Colombia. The front of the head is flattened, the prothorax feebly convex.

The process of the mesosternum as long as in *P. chrysargyrea*; apical segment of the abdomen as well as the pygidium longer than in the latter, and much more triangular. Sides of the sterna and abdomen villose with grey hairs.

Hab. Central America (without exact locality).

3. *Plusiotis clypealis* sp. nov.

♀ (?). *P.* supra argentea, splendidissima, clypeo, prothorace limbo laterali angusto retrorsum angustiore (ante basim evanescente) luteo-vinaceis: infra vinaceo-lutosa, medio argentea, nitida, tibiis quatuor posticis intus viridibus, tarsis articulis quatuor basalibus parum viridescens, articulo ultimo violaceo; pygidium elytrorum colore.

Mandibulae extus fortiter rotundatae, haud sinuatae; clypeus antrorsum levissime angustatus, rotundatus, apice late subtruncato-rotundato, margine parum reflexo, densissime ruguloso-punctatus; frons planata, laevis, juxta oculos paucis punctis instructa; mentum lateribus retrorsum gradatim leviter angustatum, apice basique medio parum sinuatum, pone marginem apicalem grosse punctatum, longitrorum medio parum impressum. Prothorax vix convexus, impunctatus, limbo vinaceo ruguloso excepto, basi ante scutellum sat fortiter dilatata, lateribus medio rotundatis, angulis anticis subacutis productis, posticis rectis angulo extremo parum rotundato. Scutellum et elytra impunctata, haec subelongata, leviter convexa, lateribus pone humeros haud impressa, callo apicali supra planato.

Infra lateribus dense striolato-rugulosa, medio impunctata, segmento abdominali quarto apice paucis punctis instructo (segmento quinto?). Processus mesosternalis sat longus, parum arcuatus. Tibiae anticae acute bidentatae, dente tertio obsolete; quatuor posticae extus ruguloso-punctatae, punctis magnis setiferis sparsis. Pygidium subtriangulare, medio laeve, lateribus ruguloso-punctatum.

Long. 25 mm., elytr. 16, lat. 13.

Allied to *P. limbata* sp. nov. and *P. chrysargyrea* Sallé; distinguished from the first by the rounded outer edges of the mandibles, the very broad and rounded clypeus, by the elytra being devoid of a punctured vinaceous buff margin, the silvery pygidium being punctured only at the sides, the bidentate anterior tibiae, and by the form of the mentum: the upperside has a very faint tint of gold which is entirely absent from the upperside of *P. limbata*, the middle of the under surface is silvery and shining, while in *P. limbata*, it is without metallic gloss and coloured like the rest of the underside; the process of the mesosternum is obviously curved, the four posterior tibiae are green internally. From *P. chrysargyrea* Sallé it differs in being smaller, in having the prothorax much less convex, the mandibles, clypeus, and pygidium differently shaped, the head and pygidium differently sculptured, the intercoxal process of the mesosternum more arched, and in the head and pronotum being less broadly vinaceous buff.

Hab. Costa Rica.

4. *Plusiotis melior* sp. nov.

♀. *P. statura* speciei *optimae* Bates, sed differt: supra argentea, splendidissima, clypei margine, prothoracis elytrorumque margine laterali reflexo, luteo-vinaceis, pygidio luteo-vinaceo-viridi: infra cum pedibus luteo-vinacea, suturis tarsorumque basi parum viridescens. Caput sat fortiter, sed haud dense punctatum, punctis in clypeo, praecipue in lateribus, densius sitis; clypeus apice medio leviter emarginatus. Pygidium lateribus levissime, sed conspicue sinuatum, margine apicali supra aum haud "alte elevato medio acute reflexo."

Long. 25 mm., elytr. 17, lat. 12.

This species differs at first sight very much from *P. optima* Bates, as the latter is of a beautiful reddish colour on the upper surface; but in shape and structure the differences between these two species are but slight, at least so far as we can tell from Bates' description.

Hab. Costa Rica.

5. *Plusiotis crassimargo* sp. nov.

♂♀. *P. laete pomacea*, pedibus—praecipue tibiis—sat rosaceis, tarsis interdum violaceo-nitentibus. Capite prothoraceque distincte, sed minute punctatis, clypeo ad marginem rugoso-punctato. Elytris singulis quinque striatis, obsolete punctatis, punctis prope sururam sat densis, lateribus post impressionem lateralem in (♂) fere laevibus, in (♀) leviter seriatim punctatis; margine externo ante medium conspicue crassato. Processu mesosternali brevi. Pygidio medio sparsim, lateraliter dense sat minute punctato. Tibiis posticis paucis punctis spiniferis instructis, fere laevibus.

Long. 42 mm., elytr. 22, lat 17.

Closely allied to *P. muiszechi* Bouc. and *P. lanicentris* Sturm., both in colour and shape; but the new species is slenderer than the others, and the legs have an obvious tint of pink colour. The punctuation of the upperside is less conspicuous than in *P. muiszechi*, and also sparser on the metasternum and pygidium; the hind tibiae, which are rough from deep punctiform grooves in *P. muiszechi* and *P. lanicentris*, have a smooth appearance, bearing only a few setiferous grooves.

Hab. Talpa, Jalisco (Mexico), 8500 feet (Dr. Buller).

One specimen is entirely pinkish buff, and has a golden gloss on the sterna.

6. *Plusiotis brevis* sp. nov.

♀. *P. brevis*, ovalis, lacte pomacea: infra parum argentea, albo-villosa. Capite prothoraceque modice dense punctatis, hoc ante medium lateribus levissime angulato, pone angulo anteriore minime sinuato, ante et post medium fere recto; clypeo semicirculari. Scutello basi villosa, punctato, apice sublaevi. Elytris sat fortiter striatis, striis irregulariter punctulatis, interstitiis dorso paucis punctis instructis: lateribus fere impunctatis, post humeros parum impressis, margine externo non dilatato. Pygidio villosa, dense punctato, punctis medio sparsioribus, convexo, margine apicali subtruncato. Mesosterno processu intercoxali brevi; metasterno lateribus dense, medio sparsim, abdomine lateraliter sat crasse sed non dense, punctatis, segmento ultimo brevi, paucis punctis instructo, margine apicali versus inferum reflexo. Tibiis parum aeneo-nitentibus, scabris.

Long. 22 mm., elytr. 16, lat. 13.

Elytra with about nine stripes each, the outer ones of which are irregular and feeble; the third and fourth interstices more raised behind, where they are confluent, the third stripe becoming obsolete beyond the middle; the sides somewhat rugose, especially in the rather slight depression behind the shoulders; the outer margin not dilated, and only very faintly flattened beside the posthumeral impression.

This species has almost the same size and outline as *P. lecontei* Horn., but is more rounded, has a pale apple green colour, and golden green tibiae; its pubescence is white; the head is broad as in *P. laniventris* and allies, and not small as in *P. lecontei*. The process of the mesosternum is a little longer than in *P. laniventris*; the last abdominal segment transverse, truncate, and transversely depressed before the apical margin.

Hab. West Mexico (taken on a journey from Durango to the Pacific).

7. *Anoplostethus laetus* sp. nov. (Pl. xiii., fig. 13.)

A. lacte viridis, parum auratus, clypeo, tibiis tarsisque aureis. Caput clypeo sat minute ruguloso-punctatum, fronte grossius, sed parum sparsius punctatum. Prothorax angulis anticis rotundatis, disco sparsim, lateribus densius punctatus. Scutellum basi ntrinque pilis albis vestitum, lateribus paucis punctis instructum. Elytra subtiliter (parum seriatim) punctata, in singulo disco tribus striis levissime impressis. Pygidium densissime ruguloso-granulatum, margine apicali sparsim ciliatum. Pro- et mesosternum, lateraque metasterni transverse ruguloso-striata, albo-pilosa; abdomen lateraliter punctulatum, sparsim rugatum, pilosum, medio paucis punctis umbilicatis transverse dispositis.

Long. 26 mm., elytr. 15, lat. 13.

Distinguished by the rich apple green colour with a tint of gold; clypeus, tibiae and tarsi more golden than the rest of the body. Upperside glabrous, only base of the scutellum with sparse white hairs at the sides. Under surface clothed with such white long hairs on the pro- and mesosternum, sides of the metasternum and first abdominal segment, these hairs standing in umbilicate punctures, which merge into one another and form irregular transverse striae.

Elytra rather sparingly punctured, the interstices being five or six times as large as the punctures, which are serially arranged here and there; one regular row of punctures close to the suture, and two slightly impressed rows on the disc, a third discal, faintly impressed line being devoid of punctures, oblique, short, scarcely reaching the middle of the elytron, anteriorly confluent with the second one. Pygidium exceedingly densely rugulose-granulate, its extreme margin golden.

Hab. Cardwell (Queensland).